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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,108	10/31/2003	Werner Beisel	Q78137	8426

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EXAMINER
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LEE, SIU M

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/697,108

Applicant(s)

BEISEL ET AL.

Examiner

Siu M. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/10/2004 10/31/2003
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

Page 11, line 2, the acronym "CS" is not define in the disclosure.

Page 11, line 3, the acronym "ODU" is not define in the disclosure.

Page 11, line 8, the acronym "IS" is not define in the disclosure.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 12 recites a method wherein said output data signal is checked whether it has said predetermined signal status, and if so, a copy of said input data signal is transmitted as said output data signal.

According to the specification, page 13, lines 1-9, if a squelched signal is detected and in response thereto the redundant data signal supplied via the protection

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line is selected as output signal. The description in the specification is the opposite of claim 13.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites two data signal; an input data signal and generated data signal with a predetermined signal status. The last step in the claim "transmitting said data signal as an output data signal" is unclear which data signal it is referring to.

5. Claim 8 is recites the limitation "said received data signal supplied via a working line" in line 4. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kremer (US 5,390,164).

(1) Regarding claim 1:

Kremer discloses a digital communication device (bidirectional line-switched ring transmission system 100 interworking with another bidirectional line-switched ring transmission system 101 in figure 1, column 3, lines 38-41) comprising interconnected modules (ring tone in figure 2, column 5, lines 34-37) for processing and/or handling received data signals, wherein said interconnected modules each comprise means for monitoring (controller 205 in figure 2) said data signal and for generating an output data signal having a predetermined signal status (STS-1 signal output by the alarm indicator signal (AIS) inserter 303 has all 1's signal in the STS-1 overhead byte, column 10, lines 7-9) if said data signal is erroneous (controller 205 monitor the incoming digital signals to determine loss-of-signal, alarm conditions or the like, column 6, lines 57-60).

(2) Regarding claim 9:

Kremer discloses a method comprising the steps of receiving an input data signal (controller 205 monitor the incoming digital signals, column 6, line 57); checking the data signal whether it is erroneous (controller 205 monitor the incoming digital signals to determine loss-of-signal, alarm conditions presence of alarm indication signal or the like, column 6, lines 57-60); if the data signal is erroneous, generating a data signal with a predetermined signal status (the alarm indication signal insert 303 out signal with the AIS with all 1's signal in the STS-1 overhead bytes and the byte of the entire STS synchronous payload envelop, column 10, lines 1-13), and transmitting said data signal

as an output data signal (the STS-1 AIS insert signal output by the AIS insert 303 in figure 4).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Ramaswami et al. (US 6,597,826 B1).

(1) Regarding claim 2:

Kremer discloses all the subject matter as discuss in claim 1 except a digital communication device according to claim 1, comprising a first I/O module for receiving a data signal and transmitting two copies of said data signal at least two interconnected modules for processing said data signal, wherein a first group of said interconnected modules receiving said first copy of said data signal and a second group of said interconnected modules receiving said second copy of said data signal; and a second I/O module for receiving said copies of the data signal transmitted by said interconnected modules, said second I/O module comprising means for monitoring said received copies of said data signal and transmitting those copy of said data signal which has not said predetermined signal status.

However, Ramaswami et al. discloses a digital communication device (cross-connect switching system 1000 in figure 20a) comprising a first I/O module (I/O port module 1604A in figure 20a) for receiving a data signal and transmitting two copies of said data signal (two copies of incoming data signal by the splitter 1608 are output by the I/O port module 1604A, column 19, lines 51-53) at least two interconnected modules for processing said data signal (switch fabric 1 1610A and switch fabric 2 1610B receives a copy of the output signal from the I/O port module 1604A), wherein a first group of said interconnected modules receiving said first copy of said data signal and a second group of said interconnected modules receiving said second copy of said data signal (column 19, lines 53-56); and a second I/O module (test port/monitor module 1605 in figure 20a) for receiving said copies of the data signal transmitted by said interconnected modules, said second I/O module comprising means for monitoring said received copies of said data signal and transmitting those copy of said data signal which has not said predetermined signal status (test port/monitor module 1605 test and monitor the optical paths through the two switch fabrics 1610A and 1610B in order to detect equipment or facility failures column 19, lines 20-23).

It is desirable to have a digital communication device according to claim 1, comprising a first I/O module for receiving a data signal and transmitting two copies of said data signal at least two interconnected modules for processing said data signal, wherein a first group of said interconnected modules receiving said first copy of said data signal and a second group of said interconnected modules receiving said second copy of said data signal; and a second I/O module for receiving said copies of the data

signal transmitted by said interconnected modules, said second I/O module comprising means for monitoring said received copies of said data signal and transmitting those copy of said data signal which has not said predetermined signal status because it provides automatic determination of the topology of the light signal (column 2, lines 10-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Ramaswami et al. in the system of Kremer to improve the reliability of the system.

(2) Regarding claim 5:

Kremer discloses all the subject matter as discuss in claim 1 except communication device is a cross-connect device and wherein said interconnected modules are switching matrix components.

However, Ramaswami et al. discloses that communication device is a cross-connect device (optical cross-connect switching system 100 in figure 1, column 4, lines 19-21) and wherein said interconnected modules are switching matrix components (the first optical switch core 240 includes a first optical switch matrix 241 and a second optical switch matrix 242, column 5, lines 33-35).

It is desirable for the communication device to be a cross-connect device and wherein said interconnected modules are switching matrix components because it provides low-loss bridging capabilities (column 2, lines 11-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Ramaswami et al. in the system of Kremer to improve the reliability of the system.



10. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Feinberg et al. (US 2002/0167694 A1).

Regarding claim 3 and 11, Kremer discloses all the subject matter as discuss in claim 1 and 9 except wherein said monitoring means comprises a threshold detector.

However, Feinberg et al. discloses a monitoring means comprises a threshold detector (the processor 240 in figure 2 determine if the signal output by the photodiode 220 is below a threshold level, if it is below a threshold level, it indicates that there is a problem on the path and switch between service and protection path, paragraph 0025, lines 7-13).

It is desirable to have the monitoring means comprises a threshold detector because it can detect failure of a service path by the photodiode is very fast since there are few if any propagation delay, paragraph 0045, lines 2-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Feinberg et al. in the system of Kremer to improve the reliability of the system.

11. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Fee (US 6,285,475 B1).

Regarding claim 4 and 10, Kremer discloses all the subject matter as discuss in claim 1 and 9 except wherein said monitoring means comprises a frequency detector.

However, Fee discloses wherein said monitoring means comprises a frequency detector (signal detector 680 in figure 6A include a tone detector tuned to the subcarrier modulation frequency to selectively determine the presence of the monitoring signal 610 (a subcarrier signal 610 may range from 1KHz to 10KHz), column 9, lines 24-26, lines 49-58).

It is desirable to have the monitoring means comprises a frequency detector because by detecting the sub-carrier signal, fault can be determined reliably and cheaply (column 6, lines 43-44). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Fee in the system of Kremer to improve the reliability and lower the cost of the system.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Iwamoto et al. (US 5,790,520).

Kremer discloses all the subject matter as discuss in claim 1 except wherein said predetermined signal status of said data signal is zero (low signal).

However, Iwamoto et al. discloses an unequipped signal wherein all bits of the signal are zero (column 3, lines 65-67).

It is desirable to have the predetermined signal status of said data signal is zero because a service can be continuously carried out without interruption by automatically switching (column 5, lines 1-4). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Iwamoto et al. in the system of Kremer to improve the reliability of the system.

***Allowable Subject Matter***

13. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukushima et al. (US 6,205,562 B1) discloses a path switching method, path switching apparatus and nodes of UPSR. Pozzuoli (US 5,982,595) discloses a redundant communications in a protective relay. Frankel et al. (US 5,187,706) discloses a dual access rings for communications networks. Mazzureo et al. (US 7,020,077 B2) discloses a cross-connect matrix task prioritizer.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Siu M. Lee whose telephone number is (571) 270-1083. The examiner can normally be reached on Mon-Fri, 7:30-4:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Siu M. Lee  
2/20/2007

  
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